

Biological Research

Program	1999 Estimate	Uncontrol. & Related Chgs.	Program Redirect	Program Changes	FY 2000 Budget Request	Change from 1999
Biological Research and Monitoring	138,521	1,892	-35,669	-7,010	97,734	-40,787
Biological Information Management and Delivery	11,443	302	-1,195	4,000	14,550	3,107
Cooperative Research Units	12,497	263	-80	0	12,680	183
Total Requirements \$000	162,461	2,457	-36,944	-3,010	124,964	-37,497

Note: The Program Redirect column reflects the redirection of funds to the Integrated Science, Science Support, and Facilities activities. The Uncontrollables & Related Changes column includes a decrease of \$1.3 million for the transfer to FWS for the San Marcos Field Station (\$300) and a one-time add in FY 1999 for the incinerator replacement in Madison, Wisconsin (\$1.0 million).

Activity Summary

Introduction

The USGS Biological Research Activity generates and distributes information needed in the conservation and management of the Nation's biological resources. This program serves as the Department of the Interior's (DOI) biological research arm and continues the strong traditions for management-oriented research developed within the Department's land management bureaus. Core biological research capability in 15 research centers and associated field stations and 39 Cooperative Research Units supports research on fish, wildlife, and habitats that is used by Federal and State Government and non-governmental organizations.

Information generated by the Biological Research program also contributes to achieving bureau goals for improved management of the Nation's water resources; availability of maps and map data; and improved decisionmaking regarding land and water use. These goals are supported by the efforts conducted in three subactivities: Research and Monitoring, Information Management and Delivery, and Cooperative Research Units.

Research and Monitoring — The USGS serves the needs of DOI bureaus by providing scientific information through research, inventory and monitoring investigations. Biological studies develop new methods and techniques to identify, observe, and manage fish and wildlife and their habitats; inventory populations of animals, plants and their habitats; and monitor changes in abundance, distribution, and health of biological resources through time and in direct relation to causative factors. Scientists work to maintain the health, diversity, and ecological balances of biological resources while meeting public needs such as game harvests and the use of public lands and waters.

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USGS biologists work toward these goals in collaboration with other scientists, customers, and partners. Biologists combine their expertise with that of the other USGS disciplines in interagency ecosystem initiatives from South Florida to the Pacific Northwest where scientists are working together to understand, evaluate, and provide options for restoring fish and wildlife habitats and better guide resource management decisions. In a collaborative process, USGS involves the users of scientific results by engaging them in the identification and prioritization of their information needs as research is planned. DOI bureaus and other customers and partners are involved in this process, and where appropriate, are involved in an adaptive process to find solutions and develop new methods by testing research results in the field.

Information Management and Delivery — The USGS strives to enhance the flow of scientific and technical information and the utility of that information among its partners. Through the development of a National Biological Information Infrastructure (NBII), this program strives to make information from current and previous research accessible to all users. The NBII is linked to the Internet, and will link government and private information sources nationwide to facilitate the rapid sharing of information among researchers and users. Further, the NBII will greatly expand the exposure and usefulness of biological information.

Cooperative Research Units — This cooperative program allows government and non-government entities with common interests and responsibilities for natural resource management to cooperatively address biological resources issues. Through this unique program, biologists from Federal and State Governments and academia are able to work as a team and focus their expertise and creativity on resolution of biological resource issues. Federal support of the Cooperative Research Units program is matched with State and university contributions of expertise, equipment, facilities, and project funding. Through university affiliations, Federal scientists train future natural resource professionals.

FY 2000 Program Highlights

The FY 2000 Budget Request for the USGS Biological Research Activity includes proposed increases totaling \$9.1 million and decreases totaling \$12.070 million. Three program increases are proposed within the Biological Research and Monitoring subactivity to expand Amphibian Research and Monitoring activities (\$4.0 million); research in the Hawaiian Archipelago (\$0.7 million); and the Coral Reef mapping, monitoring and research activities (\$0.4 million). Two

increases are being proposed in the Biological Information Management and Delivery subactivity for the Community/Federal Information Partnerships (\$3.0 million), and the National Biological Information Infrastructure (\$1.0 million). The proposed program decreases are within the Biological Research and Monitoring subactivity.

	(\$000) Program Change
Amphibian Research and Monitoring	+4,000
Hawaiian Archipelago	+700
Coral Reefs	+400
Community/Federal Information Partnerships	+3,000
Nat'l Biological Information Infrastructure	+1,000
Biological research	-5,500
Alaska Grant	-5,600
Reduction in Travel and Training	-760
Leetown HVAC System	-250

Research and Monitoring for Amphibians as an Indicator Species (+\$4.0 million) —

Because amphibians are considered good indicators of ecosystem health due to their sensitivity to many kinds of environmental stress, there is an urgent need to evaluate the scope and severity of this problem. The majority of this proposed increase (\$3.5 million) will be used to create a coordinated, nation-wide monitoring program that will conduct statistically valid amphibian monitoring on DOI lands. Activities will include compiling existing data and information on the distribution and abundance of amphibians and their habitats and conducting additional sampling to document status and to forecast trends. The remaining funds (\$0.5 million) will be used to identify factors causing amphibian declines and deformities. These studies will include the individual and combined impacts of various stressors such as contaminants, disease, global climate change, and the introduction of non-native species.

Hawaii Archipelago (+\$0.7 million) — Tropical islands, because of their geographic isolation, have a higher proportion of native species than anywhere else on earth. These unique biological communities are threatened by habitat loss and a growing number of invasive alien species. The proposed increase will expand USGS research to assess the effects of interacting stressors on island ecosystems, and to develop management strategies to improve the status of native species.

Coral Reefs (+\$0.4 million) — Recent evidence indicates that coral reefs are deteriorating worldwide. Symptoms include loss of corals, increasing abundance of benthic algae, declining populations of animals that feed on corals, increased coral disease, and increased erosion. The USGS will initiate studies to develop and test existing and emerging technologies to document coral reef health and develop management and policy options for coral reef conservation.

Community/Federal Information Partnerships (+\$3.0 million) — This increase for Community/Federal Information Partnerships will fund partnership activities with State, local, and tribal governments, other Federal agencies, academic institutions, private organizations, and others to help increase the amount of spatially referenced resources information available through the National Spatial Data Infrastructure. This includes support for specific partnership activities which will accelerate the establishment of operational Gap Analysis programs in all 50 States and improve on the application of this innovative approach for land use planning, land acquisition, and resource management. The total USGS effort of \$10.0 million is discussed in the General Statement.

National Biological Information Infrastructure (+\$1.0 million) — This increase will be used to continue development of the National Biological Information Infrastructure (NBII) by focusing on expanding access to a distributed network of biological resources data from many different government agencies and organizations.

Biological research (-\$5.5 million) — A reduction of \$3.5 million will curtail some research in the protection and habitat of at risk groups of species, a part of this type of work may be conducted within the DOI Science Priorities program. Also, a reduction of \$2.0 million will curtail research to provide information on biological impacts and management strategies associated with common water quality problems in a variety of habitats. This reduction is being proposed to fund higher priority needs requested elsewhere in the FY 2000 budget.

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Alaska Grant (-\$5.6 million) – This decrease would reduce the amount available for a grant program to conduct basic marine research on the Bering Sea and those areas in the North Pacific Ocean.

Travel and Training (-\$0.76 million) – This reduction will result in providing only the highest priority training and related travel for field biologists, research managers, and other employees.

Leetown HVAC (-\$0.25 million) – Study and design for replacement of heating, ventilation, and air conditioning (HVAC) system will be completed in FY 1999.

Federal Role

The USGS biologists work with others to provide the scientific understanding and technologies needed to support the sound management and conservation of our Nation's biological resources. The USGS continues to meet the needs of all DOI bureaus for scientific and technological information concerning biological resources. However, other Federal agencies, States, and even private entities are looking to USGS as the premiere source of biological information. The USGS contains one of the Nation's largest collections of expert scientists and technicians in the field of biology. Many outside interests look to the USGS to produce the highest quality biological information available.

Customers and Partners

The USGS is creating a culture in which customers are considered close partners in our research. This focus on knowing and meeting partners' needs, establishing a goal for partner satisfaction and measuring our performance toward reaching that goal has improved the quality of our products and services. The partner Service Plan, revised and published annually, establishes a partner satisfaction goal against which performance is measured.

Outcomes – The Government and Performance and Results Act stresses the importance of outcomes, the impact of the products and services. To measure outcomes, we asked "Did you or others in your organization actually use the information in this BRD product to make a decision about future use or management of lands or resources". FWS responded: *"All our management related to brucellosis-infected mammals is based on the information provided. We could not manage effectively without this information"*.

The biological resources program of the USGS established a goal to provide products to customers that would result in more than 80 percent of them rating their satisfaction with those products as satisfied or very satisfied. The biological resources program asked 1,227 of its customers in 1997 how satisfied they were with the products they received. Of the 367 who responded, 98 percent indicated they were satisfied or very satisfied. Respondents explained how they used the information. For example "The data presented by USGS-BRD indicates continual hot season grazing is inhibiting woody riparian regeneration. Therefore, BLM is currently issuing grazing decisions which do not allow hot season use." A respondent commented "My then 9 year old daughter and I looked at your web pages in connection with a school report she was doing. I was extremely impressed by your pages, since they did more than simply show the same

information that could be presented in a more traditional format . . . Yours presented the information in a dynamic way that took advantage of the fact that there was a computer behind it.”

The biological resources program took on the responsibility of developing a bureau-wide generic clearance package for customer surveys. OMB has approved the package, which will link the customer survey to USGS GPRA goals and improve the accuracy of the survey.

Government Performance and Results Act

Performance Targets — The following table represents the performance elements contributed by this budget activity to the GPRA Program Activities provided in aggregate in Exhibit A of the Performance Plan. Technical funding adjustments in FY 2000 were crosswalked to FY 1999 to establish base performance targets for the new Integrated Science budget activity and to normalize performance changes for the Environment and Natural Resources GPRA Program Activity. Linkages of budget and performance are further discussed in the FY 2000 Annual Performance Plan.

GPRA Program Activity	Environment & Natural Resources				
Goal Code	02.01.01. 01.00	02.01.01. 02.00	02.01.01. 03.00	02.01.01. 04.00	02.01.01. 05.00
Performance Measure	Long-term data collection & mngmnt efforts maintained & improved & large data infrastructures supported	New system-atic analyses & investiga-tions delivered	Decision support systems or predictive models developed or improved & delivered to customers	University-based partner-ships for natural systems analysis	Stake-holder Meetings
Bureau FY 98 Baseline	40	865	5	270	212
Bureau FY 99 Annual Target	40	843	6	272	228
Biological Research (current structure)	9	412	1	216	74
Biological Research (FY 2000 structure)	9	332	1	216	74
Bureau FY 00 Annual Target	36	875	7	272	241
Biological Research	9	347	1	216	74